

1967 ANNUAL REPORT

ARCTIC-YUKON-KUSKOKWIM AREA

SECTION I

MANAGEMENT

ALASKA DEPARTMENT OF FISH AND GAME

DIVISION OF COMMERCIAL FISHERIES

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FOREWORD

With the exception of the "Introduction" section, below, this report presents fishery information separately for five regulatory districts (Kuskokwim, Yukon, Norton Sound, Port Clarence and Kotzebue). Most of the comparative fishery data (since Statehood) are presented in Appendix Tables which can be found following each district.

INTRODUCTION

The Arctic-Yukon-Kuskokwim area, as shown in Figure I, is that portion of the State north of the Alaska Range and the Bristol Bay drainage. This is the largest management area in the State and is equal to the combined areas of California, Oregon, Washington, and Idaho.

A total of 1,030 licensed commercial fishermen, nearly all Eskimos or Indians, harvested 161,496 king, 654 red, 71,646 coho, 29,052 pink and 128,329 chum salmon during the 1967 season. In addition, 1,388 subsistence fishing families were surveyed by the Department, and a resultant catch of 81,832 king, 2,068 red, 1,454 coho, 18,283 pink and 578,501 chum salmon was recorded. Table 1, shows the 1967 commercial and subsistence catches by district. Table 2 is a list of A-Y-K buyers and processors, showing associated processing information for each.

During 1967 approximately \$817,000 was paid to fishermen in the Arctic-Yukon-Kuskokwim Area for salmon sold commercially. Wages earned by cannery workers and tender boat operators, about \$340,000, add considerably to the economic importance of the commercial fishery. In this area of low

industrialization, such income is of major significance. The first wholesale value of the A-Y-K salmon pack (all products) is estimated to be about \$2,800,000.

A minimum total of 682,138 salmon was taken for subsistence purposes during the 1967 season. In terms of money required to purchase a similar quantity of meat substitute, the subsistence catch is of equal or greater importance than the commercial catch. Because of its importance, the Arctic-Yukon-Kuskokwim area subsistence fishery influences the management program to a great extent.

TABLE I

ARCTIC-YUKON-KUSKOKWIM AREA TOTAL SALMON CATCH BY DISTRICT 1967

	KINGS	REDS	COHOS	PINKS	CHUMS	ALL SPECIES
KUSKOKWIM:						
Commercial	29,986	652	58,239		8,235	97,112
Subsistence	<u>61,342</u>				<u>221,918</u> ^{1/}	<u>283,260</u>
SUB-TOTAL	91,328	<u>652</u>	<u>58,239</u>		230,153	380,372
YUKON:						
Commercial	129,706	2	11,031	201	49,198	190,138
Subsistence	<u>19,661</u>				<u>288,595</u> ^{1/}	<u>308,256</u>
SUB-TOTAL	149,367	<u>2</u>	<u>11,031</u>	<u>201</u>	337,793	498,394
NORTON SOUND:						
Commercial	1,804		2,376	28,851	41,496	74,527
Subsistence	<u>817</u>		<u>1,222</u>	<u>17,516</u>	<u>26,807</u>	<u>46,362</u>
SUB-TOTAL	2,621		3,598	46,367	68,303	120,889
PORT CLARENCE:						
Commercial						
Subsistence	<u>12</u>	<u>2,068</u>	<u>232</u>	<u>767</u>	<u>1,073</u>	<u>4,152</u>
SUB-TOTAL	12	2,068	232	767	1,073	4,152
KOTZEBUE:						
Commercial					29,400	29,400
Subsistence					<u>40,108</u>	<u>40,108</u>
SUB-TOTAL					69,508	69,508
GRAND TOTAL FOR A-Y-K AREA						
Commercial	161,496	654	71,646	29,052	128,329	391,177
Subsistence	<u>81,832</u>	<u>2,068</u>	<u>1,454</u>	<u>18,283</u>	<u>578,501</u>	<u>682,138</u>
TOTALS	243,328	2,722	73,100	47,335	706,830	1,073,315
TOTALS, 1966	184,268	2,137	51,100	28,740	640,273	806,518
TOTALS, 1965	189,888	3,690	20,452	21,464	875,830	1,111,324

^{1/} Mostly chum salmon, some red, coho and pink salmon

TABLE 2

1967 ARCTIC-YUKON-KUSKOKWIM AREA PROCESSORS AND ASSOCIATED DATA

Commercial Operator	Product	Fish Per Case	Average Price Paid to Fishermen (Estimated)	District
Alaska Smokey Joe's Mile 7, Seward Highway Anchorage, Alaska	Fresh Salmon Chums Coho		\$.10 Per lb. <u>1/</u>	Kotzebue Kuskokwim (335-40)
Rotman Seafoods Kotzebue, Alaska	Fresh Salmon Chums		.14 Per lb.	Kotzebue
A-Y-K Industries 406 - G Street Anchorage, Alaska	Fresh-Frozen Salmon Chums Pinks Cohos Kings Roe		.08 Per lb. .07 Per lb. .14 Per lb. .20 Per lb.	Norton Sound
Unalakleet Fisheries, Inc. Unalakleet, Alaska	Fresh Salmon Chums Pinks Cohos Kings Roe		.08 Per lb. .07 Per lb. .14 Per lb. .20 Per lb.	Norton Sound
Far North Fishing Company Unalakleet, Alaska	Fresh Salmon Chums Pinks Kings		.10 Per lb. .08 Per lb. .25 Per lb.	Norton Sound

TABLE 2 (Continued)

1967 ARCTIC-YUKON-KUSKOKWIM AREA PROCESSORS AND ASSOCIATED DATA

Commercial Operator	Product	Fish Per Case	Average Price Paid to Fishermen (Estimated)	District
Martin's Cold Storage Nome, Alaska	Fresh Salmon Chums		\$ 1.00 Per Fish	Norton Sound
Northern Commercial Co. Nome, Alaska	Fresh Salmon Chums Pinks Cohos Kings		1.00 Per Fish .50 Per Fish 1.00 Per Fish .35 Per lb.	Norton Sound
U. S. Mercantile Co. Nome, Alaska	Fresh Salmon Chums		1.00 Per Fish	Norton Sound
Kuskokwim Fishermens Co-op Bethel, Alaska	Fresh Dressed & Frozen Salmon King Coho Roe		3.52 Per Fish .60 Per Fish	Kuskokwim
Bethel Trading Company Bethel, Alaska	Frozen Salmon Coho		.50 Per Fish	Kuskokwim
Northern Commercial Co. Bethel, Alaska	Frozen Salmon King Coho		4.00 Per Fish .50 Per Fish	Kuskokwim

TABLE 2 (Continued)

1967 ARCTIC-YUKON-KUSKOKWIM AREA PROCESSORS AND ASSOCIATED DATA

Commercial Operator	Product	Fish Per Case	Average Price Paid to Fishermen (Estimated)	District
Kuskokwim Packing Co. Bethel, Alaska	Mild Cured, Fresh Dressed Salmon King Coho Roe		\$ 3.52 Per Fish .50 Per Fish	Kuskokwim
John Samuelson Bethel, Alaska	Smoked Salmon		<u>1</u> /	Kuskokwim
Schenk Seafoods Sales 1600 Britton Road Bellingham, Washington, 98225	Fresh Dressed Salmon King Coho Roe		3.50 Per Fish .50 Per Fish	Kuskokwim
William B. Coates Box 326 Bethel, Alaska	Fresh Dressed Salmon King		<u>1</u> /	Kuskokwim
H. C. Clark Aniak, Alaska	Fresh Salmon Kings Cohos & Chums		3.50 - 5.00 Per Fish .50 Per Fish	Kuskokwim and Yukon
Northern Commercial Co. 419 Colman Building Seattle, Washington	Mild Cured, Hard Salt & Frozen Kings		4.50 Per Fish	Yukon

TABLE 2 (Continued)

1967 ARCTIC-YUKON-KUSKOKWIM AREA PROCESSORS AND ASSOCIATED DATA

Commercial Operator	Product	Fish Per Case	Average Price Paid to Fishermen (Estimated)	District
Yukon Fishing and Transportation Co. Box 487 Nenana, Alaska	Mild Cured Salmon Kings Frozen Salmon Cohos Chums		\$ 4.50 Per Fish .50 Per Fish .35 Per Fish	Yukon
John Amukon Scammon Bay, Alaska	Mild Cured and Hard Salt Kings		3.75 Per Fish	Yukon
Mickie Jones Pilot Point, Alaska	Frozen Salmon Kings		<u>1</u> /	Yukon
Mountain Village Fish Co. Mountain Village, Alaska	Canned 1/2# Flats Kings Chums	3.1 11.0	4.50 Per Fish	Yukon
Point Adams Packing Co. Hammond, Oregon	Canned 1# & 1/2# Ovals Canned 1/2# Flats Kings	3.4	4.50 Per Fish	Yukon

TABLE 2 (Continued)

1967 ARCTIC-YUKON-KUSKOKWIM AREA PROCESSORS AND ASSOCIATED DATA

Commercial Operator	Product	Fish Per Case	Average Price Paid to Fishermen (Estimated)	District
Yukon Packers 1032 Eighth Avenue Fairbanks, Alaska	Canned $\frac{1}{2}$ # Flats Kings	3.2	\$4.50 Per Fish	Yukon
Weisner Trading Co. Rampart, Alaska	Canned 1# Flats & Talls Canned $\frac{1}{2}$ # Flats Kings		4.50 Per Fish	Yukon
Bering Sea Fisheries, Inc. 611 Lowman Bldg. Seattle, Washington	Frozen Salmon in round Kings Chums Cohos		4.50 Per Fish .35 Per Fish .50 Per Fish	Yukon
Yukon Pacific Fisheries, Inc. 216 Lavery Building Fairbanks, Alaska	Frozen Salmon Kings Cohos Chums		4.50 Per Fish .50 Per Fish .35 Per Fish	Yukon
Miles M. Davic P. O. Box 75 Tanana, Alaska	Fresh, Frozen, Smoked Salmon Kings		<u>1</u> /	Yukon

TABLE 2 (Continued)

1967 ARCTIC-YUKON-KUSKOKWIM AREA PROCESSORS AND ASSOCIATED DATA

Commercial Operator	Product	Fish Per Case	Average Price Paid to Fishermen (Estimated)	District
Peter E. Merry 211 Slater Drive Fairbanks, Alaska	Fresh Salmon Kings		\$ <u>1</u> /	Yukon
Bill Carlo (Bill's Fish Wagon) 2111 Southern Aurora Subdivision Fairbanks, Alaska	Fresh Salmon Kings		<u>1</u> /	Yukon
Arctic Salmon Enterprises 309 West 31st Street Anchorage, Alaska	Fresh Salmon Kings		4.50	Yukon

1/ Information unavailable

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YUKON DISTRICT

COMMERCIAL FISHERY

This district includes all waters of the Yukon River and its tributary streams and all coastal waters from Cape Stephens, including Stuart Island southward to 62° North latitude. Commercial fishing for salmon is permitted upstream from the mouths of the Yukon and Black Rivers.

The commercial fishing area is divided into four subdistricts: 334-10, 334-20, 334-30 and 334-40 for regulatory purposes. These subdistricts are further divided into statistical areas for management and research purposes. (See Figures 2 and 3). The 1967 commercial catches by statistical area and by type of gear are presented in Table 10. District catches for 1967 were as follows: 129,706 kings, 2 reds, 11,031 cohos, 201 pinks and 49,198 chums.

The main commercial fishery is located in the lower two subdistricts, 334-10 and 334-20. The king salmon season in these two subdistricts opens June 1, with fishing for four days a week and is closed by field announcement by late June or early July depending on the strength of the run. During recent years commercial fishing has been reopened in 334-10, beginning in late July. The mid-season closures in these subdistricts are for the purpose of insuring that adequate catches of summer chum salmon are made by upriver subsistence fishermen. Commercial fishing in 334-30 is allowed for a total of four days a week until quotas of 3,000 king and 3,000 chum and coho salmon combined are taken. In 334-40 fishing is allowed seven days a week until quotas of 2,000 king and 2,000 chum and coho salmon combined are taken.

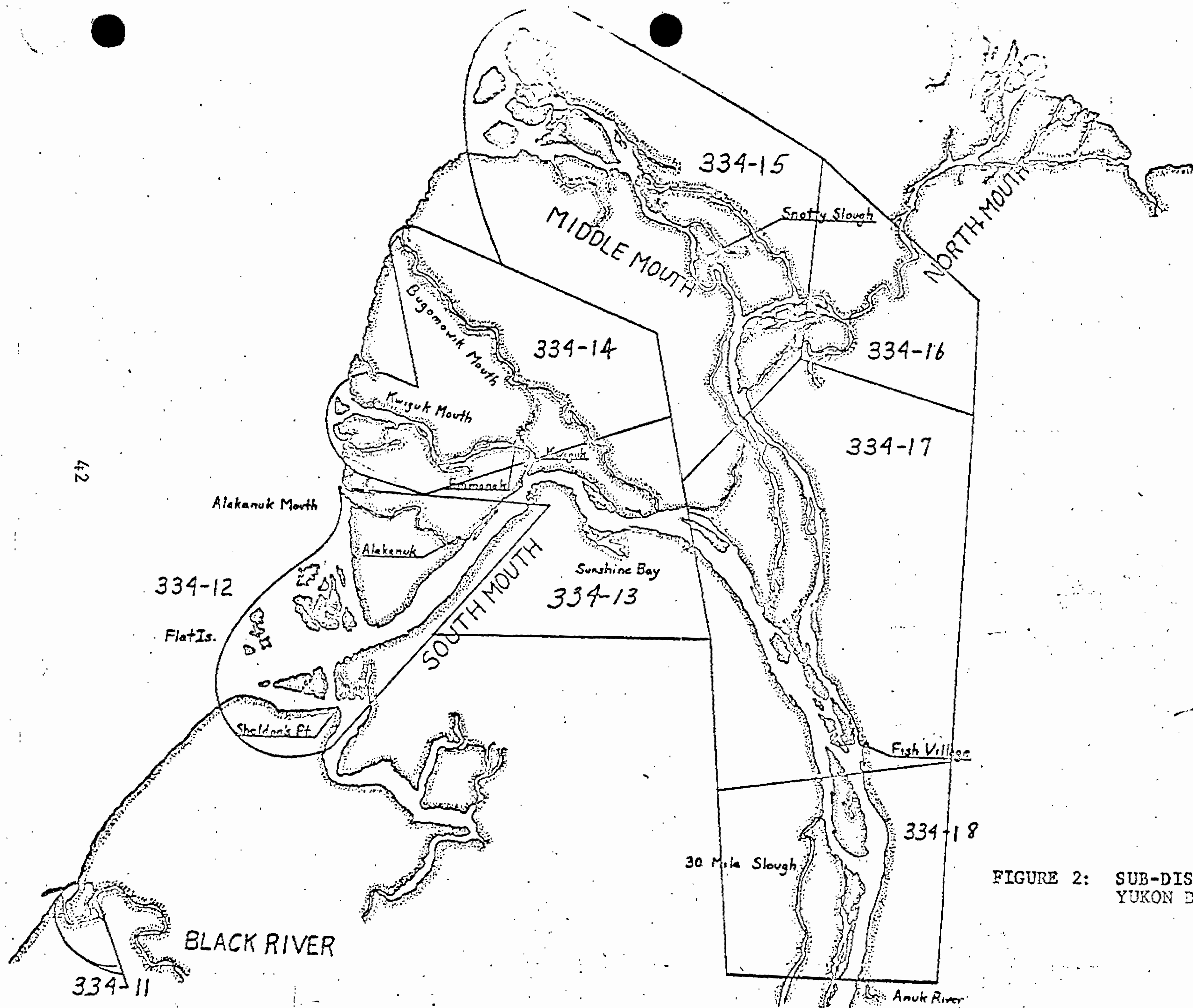


FIGURE 2: SUB-DISTRICT 334-10
YUKON DISTRICT

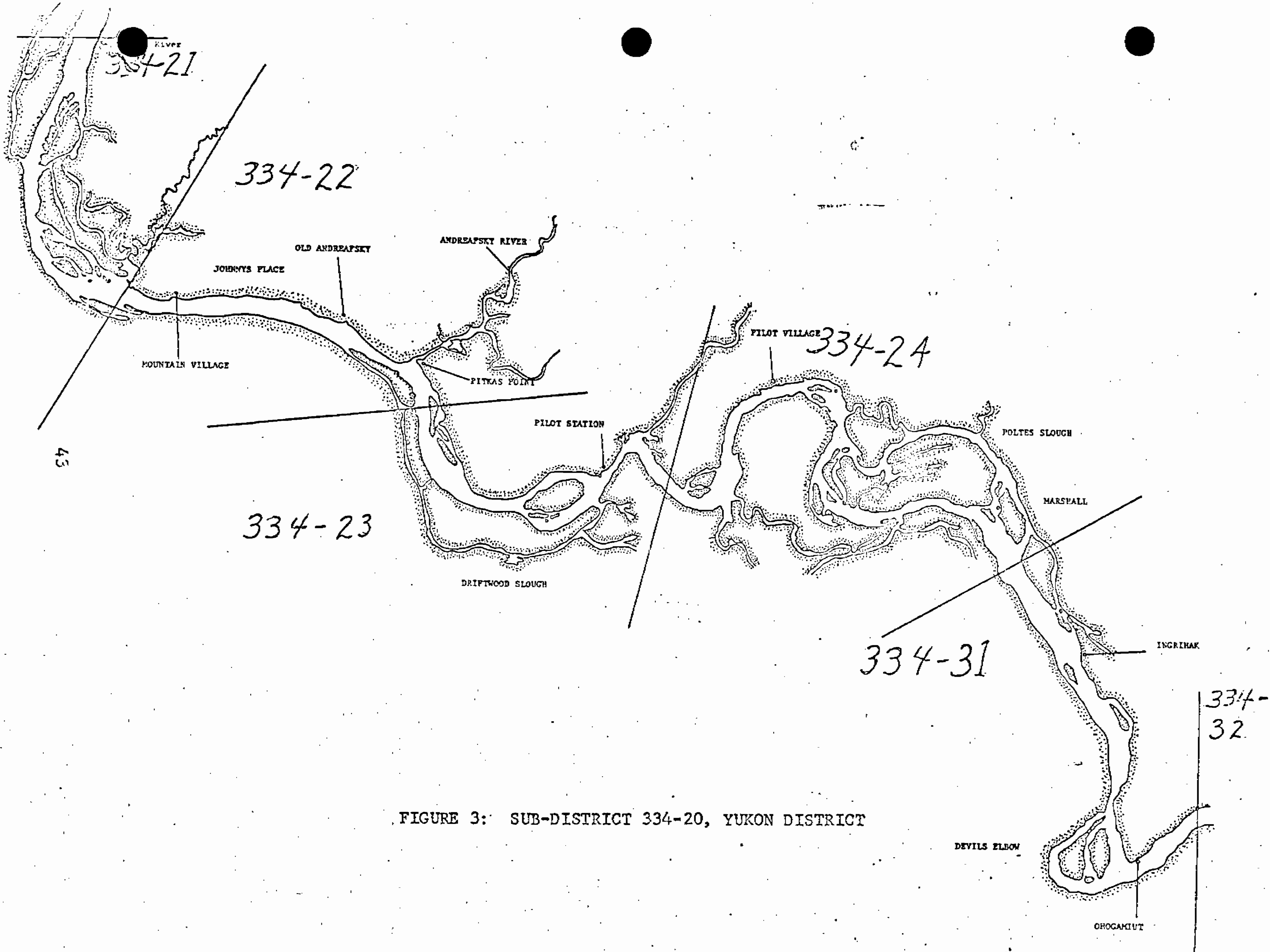


FIGURE 3: SUB-DISTRICT 334-20, YUKON DISTRICT

TABLE 10

COMMERCIAL SALMON CATCHES BY TYPE OF GEAR
AND STATISTICAL AREA, YUKON DISTRICT (334), 1967^{1/}

STATISTICAL AREA	DRIFT NET			SET NET			ALL GEAR			MAXIMUM NO. OF BOATS
	Kings	Cohos	Chums	Kings	Cohos	Chums	Kings	Cohos	Chums	
334-11		22	15	2,110			2,110	22	15	12
-12	45		516	25,781	3,122	10,949	25,826	3,122	11,465	108
-13	46	12	218	6,157	2,756	6,945	6,203	2,768	7,204 ^{2/}	25
-14	89	3	17	7,641	152	2,469	7,730	155	2,486	32
-15				27,202	2,331	16,287	27,202	2,331	16,287	60
-16		107	992	4,729	53	264	4,729	160	1,256	15
-17	11,535	187	1,872	7,048	780	3,479	18,583	967	5,351	62
-18	7,425	266	1,556	4,542	134	325	11,967	400	1,881	47
Sub-Total 334-10	19,140	597	5,186	85,210	9,328	40,718	104,330	9,925	45,945	361
334-21	7,438		676	457		150	7,895		826	33
-22	4,953		517	392		12	5,345		529	43
-23	2,876		70	1,510			4,386		70	48
-24	1,028			1,635			2,663			26
Sub-Total 334-20	16,295		1,263	3,994		162	20,289		1,425	150
334-31	395		10	891		47	1,286		57	11
-32	182			2,150	1,122	1,812	2,332	1,122	1,823	15
Sub-Total 334-30	577		10	3,041	1,122	1,859	3,618	1,122	1,880	26
Sub-Total 334-40				578			1,449 ^{3/}			3
TOTAL 334	37,780	597	6,459	92,815	10,434	42,739	129,706	11,031	49,198	

^{1/} Table does not include: 9 pinks (334-13), 2 reds and 192 pinks (334-15)

^{2/} 41 Chum salmon caught by fishwheel in Stat.Area 334-13 are included.

^{3/} 871 King Salmon caught by fishwheel in Subdistrict 334-40 are included.

A record total of 607 commercial fishermen, 549 fishing vessels, 249 drift gill nets (13,730 fathoms), 431 set gill nets (40,875 fathoms) were licensed in 1967. (See Appendix Table 14). Several fishwheels are operated also each year, the majority of which are operated in 334-40.

Yukon district commercial fishermen, nearly all resident Eskimo and Indians, received about \$606,000. for their catches. In addition about \$250,000. in wages were estimated to have been earned by processing plant employees and tenderboat operators. The latter figure was obtained from information supplied by a majority of the buyers and processors. The first wholesale value of the 1967 pack was estimated at \$1,864,800.00. A list of Yukon processors showing type of processing method used by each is included in Table 2.

Appendix Tables 12 through 17 show comparative catch, license registration, pack, dollar value, mean price and mean weight data for the past several years.

King Salmon Fishery: A record district catch of 129,706 king salmon was made in 1967. This does not include 1,917 kings taken by Canadian commercial fishermen at Dawson in the Yukon Territory. The previous high catch for the district was 120,203 taken in 1961. The 334-10 catch of 104,350 represented about 80% of the total district catch, and nearly equaled the record catch for this subdistrict of 104,822 made in 1919. The 334-10 catch was 15,082 fish greater than in any year since 1919. Catches made in the other subdistricts during 1967 were slightly below average in magnitudes.

Tables 11 through 13 present daily catch data for the lower three subdistricts. Daily catch data for 334-40 are not presented (See Table 10 for total catches).

TABLE 11

COMMERCIAL SALMON CATCHES FROM SUB-DISTRICT 334-10,
YUKON DISTRICT, DRIFT AND SET NETS COMBINED, 1967

Date of Landing		Hours Fished	No. of Boats	TOTAL CATCH (Catch/Boat Hr.)			CUMULATIVE CATCH		
				KINGS	CONOS	CHUMS	KINGS	CONOS	CHUMS
JUNE	1	6							
	2	24	178	2,562			2,562		
	3	18	206	1,793			4,355		
Sub-Total		48	224	4,355 (0.4)					
	5	18	181	5,300			9,655		
	6	24	202	10,465			20,120		
	7	6	250	11,131			31,251		
Sub-Total		48	302	26,896 (1.9)					
	8	6	25	599			31,850		
	9	24	209	3,562		2	35,412		2
	10	18	257	2,532			37,944		2
Sub-Total		48	282	6,693 (0.5)		2(+)			
	12	18	216	7,988			45,932		
	13	24	270	12,247		36	58,179		38
	14	6	226	4,475		33	62,654		71
Sub-Total		48	301	24,710 (1.7)		69(+)			
	15	6	21	210			62,864		71
	16	24	246	2,335		99	65,199		170
	17	18	172	1,277		52	66,476		222
Sub-Total		48	284	3,822 (0.3)		151(+)			
	19	18	235	6,749		1,204	73,225		1,426
	20	24	211	5,197		547	78,422		1,973
	21	6	242	5,023		689	83,445		2,662
Sub-Total		48	303	16,969 (1.2)		2,440(0.2)			

TABLE 11 (Continued)

COMMERCIAL SALMON CATCHES FROM SUB-DISTRICT 334-10,
YUKON DISTRICT, DRIFT AND SET NETS COMBINED, 1967

Date of Landing		Hours Fished	No. of Boats	TOTAL CATCH (Catch/Boat Hr.)			CUMULATIVE CATCH		
				KINGS	COHOS	CHUMS	KINGS	COHOS	CHUMS
JUNE	22	6	30	344		53	83,789		2,715
	23	24	253	6,758		1,002	90,547		3,717
	24	13	284	7,478		2,702	98,025		6,419
Sub-Total		48	301	14,580 (1.0)		3,757 (0.3)			
Sub-Total	26	18	172	3,634		1,319	101,659		7,738
	27	6	244	2,676		1,756	104,335		9,494
		24	275	6,310 (1.0)		3,075 (0.5)			
SUB-TOTALS 1/				104,335 (1.0)	0	9,494 (0.1)			
JULY	24	18	20		7	572	104,335	7	10,066
	25	24	41	1	21	1,638	104,336	28	11,704
	26	6	41		29	2,018	104,336	57	13,763
Sub-Total		48	53	1 (+)	57 (+)	4,269 (1.7) 2/			
Sub Total	27	6	4		7	87	104,336	64	13,850
	28	24	73	2	105	5,224	104,338	169	19,074
	29 3/	18	71	1	99	4,037	104,339	268	23,111
Sub Total		48	90	3 (+)	211 (+)	9,348 (2.2)			
AUGUST	31	18	23	1	25	988	104,340	293	24,099
	1	24	42	1	91	1,723	104,341	384	25,827
	2	6	43		155	1,598	104,341	539	27,425
Sub-Total		48	66	2 (+)	271 (0.1)	4,314 (1.4)			
Sub-Total	3	6							
	4	24	31		136	464	104,341	675	27,889
	5	18	40		259	312	104,341	934	28,201
Sub-Total		48	49	0	395 (0.2)	776 (0.3)			

TABLE 11 (Continued)

COMMERCIAL SALMON CATCHES FROM SUB-DISTRICT 334-10,
YUKON DISTRICT, DRIFT AND SET NETS COMBINED, 1967

Date of Landing		Hours Fished	No. of Boats	TOTAL CATCH (Catch/Boat Hr.)			CUMULATIVE CATCH		
				KINGS	CONOS	CHUMS	KINGS	CONOS	CHUMS
AUGUST	7	18	19	2	63	226	104,343	997	28,427
	8	24	46		632	2,690	104,343	1,629	31,117
	9	6	67	2	716	5,000	104,345	2,345	36,117
Sub-Total		48	76	4 (+)	1,411(0.4)	7,916(2.2)			
	10	6	6		66	499	104,345	2,411	36,616
	11	24	34	1	271	586	104,346	2,682	37,202
	12	18	90	1	1,985	3,416	104,347	4,667	40,618
Sub-Total		48	99	2 (+)	2,322(0.5)	4,501(0.9)			
	14	18	30	1	283	511	104,348	4,950	41,129
	15	24	41		655	585	104,348	5,605	41,714
	16	6	40		726	806	104,348	6,331	42,520
Sub-Total		48	62	1 (+)	1,664(0.6)	1,902(0.6)			
	17	6	4		113	128	104,348	6,444	42,648
	18	24	44	1	572	902	104,349	7,016	43,550
	19	18	62		833	1,179	104,349	7,849	44,729
Sub-Total		48	78	1 (+)	1,518(0.4)	2,209(0.6)			
	21	18	20		120	70	104,349	7,969	44,799
	22 4/	24	34		397	195	104,349	8,366	44,994
	23	6	46		692	355	104,349	9,058	45,349
Sub-Total		48	61	0	1,209(0.4)	620(0.2)			

TABLE 11 (Continued)

COMMERCIAL SALMON CATCHES FROM SUB-DISTRICT 334-10
YUKON DISTRICT, DRIFT AND SET NETS COMBINED, 1967

Date of Landing	Hours Fished	No. of Boats	TOTAL CATCH (Catch/Boat Hr.)			CUMULATIVE CATCH		
			KINGS	COHOS	CHUMS	KINGS	COHOS	CHUMS
AUGUST	24	6						
	25	24	25	324	253	104,349	9,382	45,602
	26	24	42	1	500	104,350	9,882	45,913
	27	24	6	43	32	104,350	9,925	45,945
Sub-Total	78	48	1 (+)	867(0.2)	596(0.2)			

67 SUB-TOTALS 5/ 15 (+) 9,925 (0.3) 36,451 (1.1)

GRAND TOTAL 104,350 (0.8) 9,925 (0.1) 45,945 (0.3)

- 1/ King Salmon Season (6/1 - 27)
- 2/ 41 Chums caught by Fishwheel
- 3/ 2 Reds and 192 Pinks caught this Date.
- 4/ 9 Pinks caught this Date.
- 5/ Fall Salmon Season (7/24 - 8/27)

TABLE 12

COMMERCIAL SALMON CATCHES FROM SUB-DISTRICT 334-20,
YUKON DISTRICT, DRIFT AND SET NETS COMBINED, 1967

Date of Landing	Hours Fished	No. of Boats	TOTAL CATCH (CATCH/HR., LB.)		CUMULATIVE CATCH	
			KINGS	CHUMS	KINGS	CHUMS
JUNE 1	18					
2	24	31	315		315	
3	6	45	430		745	
Sub-Total	48	65	745 (0.2)			
4	6					
5	24	63	358		1,103	
6	18	92	672		1,775	
Sub-Total	48	95	1,030 (0.2)			
8	18	86	1,285		3,060	
9	24	80	1,298		4,358	
10	6	93	1,277		5,635	
Sub-Total	48	115	3,860 (0.7)			
11	6					
12	24	75	511		6,146	
13	18	103	2,591		8,737	
Sub-Total	48	110	3,102 (0.6)			
15	18	42	647		9,384	
16	24	70	1,351	17	10,735	17
17	6	84	1,290		12,025	17
Sub-Total	48	105	3,288 (0.7)	17(+)		
18	6					
19	24	74	332		12,357	17
20	18	69	683		13,040	17
Sub-Total	48	88	1,015 (0.2)			
22	18	64	922	27	13,962	44
23	24	79	1,207		15,169	
24	6	81	1,200	54	16,369	98
Sub-Total	48	105	3,329 (0.7)	81(+)		
25	6	16	522	187	16,891	285
26	24	82	1,610	301	18,501	586
27	18	90	1,788	839	20,289	1,425
Sub-Total	48	98	3,920 (0.8)	1,327 (0.3)		

GRAND TOTAL 20,289 (0.5) 1,425 (+)

TABLE 13

COMMERCIAL SALMON CATCHES FROM SUB-DISTRICT 334-30,
YUKON DISTRICT, DRIFT AND SET NETS COMBINED, 1967

Date of Landing	No. of Boats	TOTAL CATCH			CUMULATIVE CATCH	
		Kings	Cohos	Chums	Kings	Chums
JUNE 6	5	23			23	
8	14	132			155	
9	7	63			218	
13	11	258		1	476	1
14	9	156			632	1
15	11	140			772	1
16	16	677			1,449	1
19	5	169			1,618	1
20	17	237		4	1,855	5
21	10	189			2,044	5
22	12	148			2,192	5
23	15	254			2,446	5
26	3	30			2,476	5
27	15	266		52	2,742	57
28	10	223			2,965	57
29	13	273			3,238	57
30	15	380			3,618	57
SUB-TOTALS <u>1/</u>		3,618	0	57		
SUB-TOTALS <u>2/</u> (8/7 - 8/31)		0	1,122	1,823		
GRAND TOTAL		3,618	1,122	1,880		

1/ King Salmon Season

2/ Fall Salmon Season

Based on upriver catches, the first king salmon entered the river unusually early, possibly as early as May 20. The first period catches (June 1 - 3) were the greatest ever recorded for sub-districts 334-10 and 334-20. Peak catches in 334-10 were made during June 5 - 7 and June 12-14, although relatively good catches were made during the last week (June 20-27). To illustrate the fluctuating nature of the 1967 run, nearly 27,000 king salmon were taken in 334-10 during June 5-7 yet only 6,693 were taken during the following open period, June 8-10.

Several processors in 334-10 received more fish than they could handle during the June 5-7 glut. Delays in processing this catch resulted in a general lowering of the quality of the pack and a total loss of at least 800 king salmon during this time.

The number of licensed fishing boats slightly exceeded that of 1966 and was the greatest ever recorded for the district. The number of boat hours, especially in 334-10, was considerably greater than in past years. This was a result of more participating boats and greater effort during early June because of the early breakup and arrival of the run compared to previous seasons.

The 1967 catch per boat hour for 334-10 (1.02) compares favorably with previous years especially in light of the large increase in fishing effort. (See Appendix Table 12). Catches per boat hour in 334-20 and 334-30 were comparatively poor; .54 and .89 respectively. Large amounts of driftwood hampered fishing effort in these latter two sub-districts for several days during the first two weeks of the season. The exact quantitative effect this had on the catches cannot be determined. Driftwood was also a problem for some fishermen in 334-10, but to a lesser extent.

By comparing catch data through June 25, escapements above Fish Village (Mile 52) were judged to be just fair, while record catches had been made by delta fishermen. Also, the open fishing periods in the vicinity of the mouths, where a major share of the effort occurs, coincided exactly with the two greatest peaks in the run (June 5-7 and 12-14). This resulted in a substantial reduction in the numbers of these fish available to upriver areas. For these reasons, the seasons in 334-10 and 334-20 were closed by field announcement on June 27, about 5 - 9 days earlier than closures for the previous six seasons. The early closure was judged necessary to insure proper escapement of king salmon into spawning tributaries. Based on Department tagging-test fishing catches, the run declined sharply after July 2 in the South Mouth and after June 29 in the Middle Mouth.

Chum and Coho Salmon Fishery: Tables 10 through 13 also show commercial catch data for these species. A total of 11,031 coho and 49,198 chum salmon were taken in the district during 1967.

For the first time since the 1920's, other species of salmon captured incidentally during the king salmon season (June 1 - 27) in the lower two sub-districts could be sold. A total of 9,494 and 1,425 chum salmon were sold during this time in 334-10 and 334-20 respectively. Although the first chums appeared early (May 30) the peak of the summer run in the delta area did not occur until about June 25 - July 2, somewhat later than normal. As a result of the early closure, catch and sale of these incidentally captured salmon was somewhat disappointing. The commercial catches do not represent the total incidental catch as some fishermen utilize these fish for personal use and tenderboat service was not provided to all fishermen.

Commercial fishing in 334-10 was re-opened on July 24 by field announcement. A total of 9,925 coho and 36,451 chum salmon was taken between July 24 and August 27 (Fall Season). The weekly fishing periods were similar to those during the king salmon season, but were extended to seven days a week effective August 26, because of a decline in fishing effort. Even so processing operations were terminated the following day on August 27.

The run of Fall chum salmon normally fluctuates considerably, the best catches were made during July 27 - 29, and August 7 - 9. Catches of this species declined fairly steadily after August 9. The best coho salmon catches were made during August 10 - 16.

SUBSISTENCE FISHERY

Yukon River subsistence fishermen took an estimated 19,661 king, 286,895 chum and 1,700 pink salmon during 1967. This catch was taken from both the Alaskan and Canadian portions of the drainage. Table 14 shows catch data by village recorded in 1967 and Appendix Table 18 shows comparative catch data for 1961 - 1967.

The recorded catches represent minimum figures for the following reasons:

1. Catches made late in the season after completion of surveys are not always recorded.
2. Some salmon consumed prior to the time of survey are not always recorded.
3. Information is incomplete or lacking for some areas:
Chalkyitsik, Venetie, Canyon Village, Fairbanks.
4. The majority of the Tanana River catch lost during floods was not tabulated.

TABLE 14

YUKON DISTRICT SUBSISTENCE CATCH DATA (EXPANDED), 1967
(INCLUDES CANADIAN CATCHES)

Fishing Unit	Date of Survey	Fishing Families	Dogs	Snow Travelers	Kings	Chums ^{1/}	Pinks	Total Salmon	Units of Gear		
									Chum Net	King Net	Fish-Wheels
Alakanuk	8/5-7	48	126	34	287	9,843	121	10,251	66	2	
Sheldons Point	8/14	18	60	7	755	2,729	28	3,512	14	3	
Kwiguk-Emmonak	8/17	38	145	17	541	15,248	66	15,855	54	6	
Aproka Pass & Vicinity	8/18	13	53	9	959	7,852	58	8,869	19	2	
Hamilton-Kotlik	8/19	18	48	13	162	7,225	26	7,413	21	1	
Mountain Village	8/21-22	36	130	24	1,345	8,080	225	9,650	39	6	
Pitkas Point-St. Marys	8/22-23	34	174	14	993	9,572	218	10,783	31	3	1
Pilot Station	8/23-24	29	135	7	1,534	5,803	717	8,054	30	12	
55 Marshall	8/24	19	118	6	306	3,012	58	3,376	24	6	
Russian Mission	8/25	19	85	1	2,019	4,889	8	6,916	16	7	
Holy Cross	8/24-25	26	109	7	2,876	22,334	7	25,217	25	21	2
Anvik	8/29	15	104	12	54	20,785	8	20,847	14	1	5
Grayling	8/29	17	110	7	199	22,851	1	23,051	7	4	8
Kaltag	9/1	22	217	9	199	26,871	157	27,227	15	3	11
Nulato	9/2	32	314	5	578	22,519	2	23,099	38	4	6
Koyukuk	9/3	12	145	4	262	4,613		4,875	14	4	2
Galena	9/5	10	75	5	210	2,650		2,860	3	3	4
Ruby	9/6	13	92	4	820	10,690		11,510	3	2	7
Tanana	9/14	13	137	1	151	11,938		12,089			9
Rampart	9/12	6	84		368	15,763		16,131		1	5
Stevens Village	9/12	12	78	2	534	3,145		3,679		4	4
Beaver	9/12	5	34	1	210	4,292		4,502	1	1	3
Fort Yukon	9/13	12	124	2	692	8,983		9,675			14
Dawson ^{2/}	3/	3/	3/	3/	50	50		100		2	
Mayo ^{2/}	"	"	"	"	30			30		2	
Fort Selkirk ^{2/}	"	"	"	"	400	1,000		1,400		1	
Pelly River ^{2/}	"	"	"	"	600			600		6	
Kluane ^{2/}	"	"	"	"		250		250		4	

TABLE 14

YUKON DISTRICT SUBSISTENCE CATCH DATA (EXPANDED), 1967
(INCLUDES CANADIAN CATCHES) (CONT.)

Fishing Unit	Date of Survey	Fishing Families	Dogs	Snow Travelers	Kings	Chums ^{1/}	Pinks	Total Salmon	Units of Gear		
									Chum Net	King Net	Fish-Wheels
Carmacks <u>2/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>	1,450	500		1,950		9	
Ross River <u>2/</u>	"	"	"	"	150			150		6	
Tatchun Creek <u>2/</u>	"	"	"	"	250			250		1	
Teslin River <u>2/</u>	"	"	"	"	200			200		3	
Takhini River <u>2/</u>	"	"	"	"	40			40	2		
Minto <u>2/</u>	"	"	"	"		50		50	1		
MAIN RIVER TOTALS		467 +	2,724 +	191 +	19,224	253,537	1,700	274,461	437	130	81
Huslia	9/9	11	80	8	7	5,489		5,496	16		
Hughes	9/9	8	76	3	65	5,837		5,902	15		
Alatna	9/9	2	22		0	170		170	1		
Allakaket	9/9	14	108	2	70	3,929		3,999	33		
KOYUKUK RIVER TOTALS		35	286	13	142	15,425		15,567	65		
Minto	9/10	2	18			22		22			1
Nenana	9/10	2	10	1	252	3,517		3,769			4
TANANA RIVER TOTALS		4	28	1	252	3,539		3,791			5
Venetie	9/13	11	97	2		2,626		2,626	10		1

TABLE 14

YUKON DISTRICT SUBSISTENCE CATCH DATA (EXPANDED), 1967
(INCLUDES CANADIAN CATCHES) (CONT.)

Fishing Unit	Date of Survey	Fishing Families	Dogs	Snow Travelers	Kings	Chums ^{1/}	Pinks	Total Salmon	Units of Gear		
									Chum Net	King Net	Fish-Wheels
CHANDALAR RIVER TOTALS		11	97	2		2,626		2,626	10		1
Old Crow ^{2/}	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>	43	11,768		11,811	25		
PORCUPINE RIVER TOTALS		<u>3/</u>	<u>3/</u>	<u>3/</u>	43	11,768		11,811	25		
YUKON DRAINAGE-GRAND TOTALS		517 +	3,135 +	207 +	19,661	286,895	1,700	308,256	537	130	87

^{1/} Includes small numbers of cohos and reds^{2/} From Canadian Dept. of Fisheries, Whitehorse^{3/} Information not available

Subsistence catches are influenced by salmon abundance and fishing effort. Several factors influencing the Yukon River subsistence fishery are:

1. Adverse weather and river conditions. Floods in the Tanana River drainage seriously limited catches and swept away most of the catch made early in the season. The Department survey crew interviewed very few Tanana River fishermen as most had been evacuated to Fairbanks. High waters and driftwood probably adversely affected some fishermen located below the confluence of the Tanana and Yukon Rivers.
2. Immediate employment situation (short-term construction projects and firefighting).
3. Decline in the dependance on subsistence fishing. Increased welfare and more employment opportunities have resulted in a general decline in fishing effort throughout the drainage. Also, snow machines are beginning to replace sled dogs and this is expected to speed up the decline of the subsistence fishery in the future.

Subsistence catches of Yukon River chum salmon have declined markedly during the past two seasons. (See Appendix Table 18). Although adverse fishing conditions and the immediate employment situation have had some effect, the reduced catches are largely the result of a decline in the dependance on subsistence fishing.

King salmon catches have fluctuated during the past seven years but a definite decline in recent year catches is not indicated. The 1967 king salmon catch was definitely better than that of 1966.

ESCAPEMENT

Very little good information regarding 1967 spawning escapements was obtained due to high and turbid conditions of the tributary streams throughout the drainage. Table 15 presents king salmon escapement data for certain areas during the 1960 - 1967 period.

Surveys of the Andreafsky and Anvik Rivers on July 22 indicated better king salmon escapements than in 1966. It was difficult to judge comparative escapements in these streams for the past several seasons because of poor counting conditions. For example only about one-half of the Andreafsky River (main fork) was surveyed on July 22 of this year during which time 276 king salmon were observed under less than optimum counting conditions. This entire stream was surveyed in 1966 under optimum conditions with only 303 kings observed. Counts for this stream have ranged from 303 to 1,220 during the 1960 - 1966 period.

The Whitehorse dam counts made during 1967 were below average, the second lowest count since 1960.

Because of severe flooding of the Tanana River drainage during July and August, salmon spawning success and egg survival was probably very poor. Flooding conditions (erosion, siltation, channel shifting), were so extreme that the 1967 brood stock of king and summer chum salmon may have been virtually eliminated in some streams. The area of intense flooding included the Salcha River, an important king and chum salmon producer.

DISCUSSION

Prior to 1961 the commercial king salmon fishery was restricted to catch quotas of varying sizes; a quota of 50,000 king salmon was in effect

TABLE 15

COMPARATIVE ESCAPEMENT DATA FOR 1960-1967, YUKON RIVER DRAINAGE ^{1/}

	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>
East Fork, Andreafsky River	1,020	1,003	675*	-	867	-	361	-
West Fork, Andreafsky River	<u>1,220</u>	-	<u>762*</u>	-	<u>705</u>	355*	<u>303</u>	276*
Totals, Andreafsky River	2,240	-	1,437*	-	1,572	-	664	-
Anvik River	1,950	1,226	-	-	-	650*	638	336*
Salcha River	1,660	2,878	937	-	450	408	800	-
Whitehorse Dam Bypass Actual Count ^{2/}	660	1,068	1,500	484	587	903	563	533

^{1/} With exception of Whitehorse Dam Count, escapement data are from aerial surveys, a (*) indicates poor survey conditions.

^{2/} 1,054 counted in 1959, 1959-67 data from Canadian Department of Fisheries, Whitehorse

during most years. During the 1954 - 1960 period, a 65,000 quota and commercial fishing for 5½ days a week were allowed.

Since 1961, quotas have been removed for most of the king fishery (334-10 and 334-20) which has been regulated by scheduled openings and closures each week. The field announcement authority has proved very necessary to the proper management of the fishery as fishing time and the length of the season has varied according to the strength of the run. As mentioned previously, commercial fishing generally has been allowed for two 48 - hour periods each week during most of June and sometimes into early July.

A total of 120,203 kings were harvested commercially in 1961, almost double that of previous years. Since six year old king salmon are the greatest contributors to the commercial catch, the 1967 fishery was anticipated as the first test of the present system of management. On the basis of the record catch made this season, it appears that the 1961 fishery permitted sufficient numbers of king salmon to spawn and produce a run of similar magnitude in 1967. The age structure of the 1967 catch was very similar to that of previous years.

Further restrictions, however, seem necessary as the fishery has become more efficient in the capture of king salmon and escapements in recent years may represent a smaller percentage of the total run. The limited escapement data collected since 1959 indicates that this is true, at least in some areas.

The following are examples of the king salmon fishery becoming more efficient in the capture of salmon:

1. In 1967 there were 549 fishing boats licensed in the district compared to 350 in 1961; this represents an increase of over 50%.

Licensed fishing boats have increased 75% in subdistrict 334-10 during the same time. An increase in licensed boats and fishermen in the district has been noted each year since 1963.

2. Due to increased competition, the fishermen are fishing harder with more efficient gear. The use of drift gill nets, which are more efficient than set gill nets, if operated properly, has increased each year. For example, there were 2,700, 6,000 and 13,000 fathoms of drift net licensed in the district during 1960, 1961 and 1967 respectively.
3. Fishermen are now distributed throughout the lower Yukon, whereas in previous years gear was concentrated only near the mouths. There are now approximately 100 fishermen operating in upper 334-10 (from Fish Village to Anuk River) compared to less than 20 fishermen that operated there in 1961. Good catches are commonly made in this area since it is located just above the confluence of all the mouths or passes.

The following regulation changes, beginning with the 1968 season, were adopted by the Alaska Board of Fish and Game:

1. Reduction in fishing time in subdistricts 334-10 and 334-20 from 4 to 3½ days a week during the king salmon season.
2. Prohibit the use of drift gill nets of over 50 fathoms in length (the previous limit was 150 fathoms). There are very few fishermen that operate drift gill nets exceeding 50 fathoms in length, e.g., there were 249 nets licensed in 1967 averaging 55 fathoms each. If all fishermen had operated the full amount (150 fathoms), then the aggregate length of drift nets in use would have increased

over 200% in 1967

3. Prohibit the use of fishwheels by commercial fishermen during the king salmon season in the lower two sub-districts. Present regulations provide that chums taken incidentally with king salmon nets (minimum mesh of 8 inches) can be sold. The use of fishwheels, very effective in capture of chum salmon, was overlooked when these regulations were adopted by the Board last year.

For the first time since the 1920's, six experienced non-resident fishermen were brought up from the Columbia River to fish the Yukon by two processors. Two of these fishermen were supposedly brought up for the purpose of instructing native fishermen in fishing method and gear maintenance. However, they fished every period and probably did very little to further the education of resident fishermen. Early in the season these two fishermen operated drift gill nets, up to 70 feet in depth, near Alakanuk without success (in 70 hours of fishing they caught no salmon). Later they switched to set and drift netting upriver in the 30 mile area with good success. They were impressed with the great amount of relatively efficient gear present. These two fishermen expressed interest in returning for the 1968 season, but the plans of the other four, who fished with little success in 334-20, could not be determined.

It has been the Department's policy to discourage fishing by non-residents in the Arctic-Yukon-Kuskokwim Area by pointing out the relatively small catches that are normally made during the very short fishing seasons. Also, prospective Yukon non-resident fishermen have been informed that increases in fishing effort would result in less fish per fisherman as the Department considers that maximum or near-maximum catches of king salmon are being taken.

APPENDIX TABLE 12

YUKON DISTRICT (334) KING SALMON COMMERCIAL CATCH DATA, 1960 - 1967 ^{1/}

YEAR	334-10	334-20	Sub-Total (10+20)	334-30	334-40	Totals -334
COMMERCIAL CATCH						
1960	50,713	15,994	66,707		884	67,591
1961	84,406	29,028	113,434	4,965	1,804	120,203
1962	67,072	22,224	89,296	4,687	724	94,707
1963	85,004	24,211	109,215	6,976	803	116,994
1964	67,555	20,246	87,801	4,705	1,081	93,587
1965	89,268	23,763	113,031	3,204	1,863	118,098
1966	70,783	16,927	87,710	3,612	1,988	93,310
1967	104,335	20,289	124,624	3,618	1,449	129,691

YEAR	334-10	334-20	Sub-Total (10+20)	334-30
BOAT HOURS (Catch per boat hour)				
1960	40,848 (1.24)	34,914 (0.46)	75,762 (0.88)	
1961	79,224 (1.07)	29,118 (1.00)	108,342 (1.05)	2,808 (1.77)
1962	84,792 (0.79)	38,118 (0.58)	122,910 (0.73)	2,520 (1.86)
1963	72,288 (1.18)	27,672 (0.87)	99,960 (1.09)	5,616 (1.24)
1964	56,736 (1.19)	22,398 (0.91)	79,134 (1.11)	4,596 (1.02)
1965	78,096 (1.14)	31,008 (0.77)	109,104 (1.04)	2,286 (1.40)
1966	69,894 (1.01)	22,380 (0.76)	92,274 (0.95)	1,782 (1.23) ^{2/}
1967	102,456 (1.02)	37,488 (0.54)	139,944 (0.89)	4,050 (0.89)

^{1/} King Salmon season only

^{2/} Catch per vessel hour does not include 1,421 King Salmon captured by an unknown number of fishermen

APPENDIX TABLE 13
COMPARATIVE FALL SALMON COMMERCIAL FISHERY DATA, SUB-DISTRICT 334-10, 1961-1967

<u>C H U M S A L M O N</u>				
<u>YEAR</u>	<u>CATCH</u>	<u>BOAT HOURS</u>	<u>MEAN CATCH PER BOAT HOUR</u>	<u>DAYS FISHED</u> ^{1/}
1961	42,461	14,772	2.9	16
1962	53,116	46,950	1.1	21
1963	0			
1964	8,347	8,346	1.0	17
1965	22,936	2/	2/	2/
1966	69,836	41,994	1.7	28
1967	36,451	19,272	1.9	21

<u>C O H O S A L M O N</u>				
<u>YEAR</u>	<u>CATCH</u>	<u>BOAT HOURS</u>	<u>MEAN CATCH PER BOAT HOUR</u>	<u>DAYS FISHED</u> ^{1/}
1961	2,855	14,772	0.2	16
1962	22,926	46,950	0.5	21
1963	5,572	2,100	2.7	18
1964	2,446	8,346	0.3	17
1965	350	2/	2/	2/
1966	19,254	41,994	0.5	28
1967	9,925	19,272	0.5	21

APPENDIX TABLE 14

YUKON DISTRICT (334) VESSEL AND GILL NET LICENSES ISSUED BY SUB-DISTRICT, 1960 - 1967 ^{1/}

	YEAR	334-10	334-20	334-30	334-40 ^{2/}	TOTALS-334
Fishing Vessel						
	1960	186	33		10	229
	1961	210	112	18	10	350
	1962	320	127	31	12	490
	1963	272	113	22	6	413
	1964	314	101	24	12	451
	1965	322	111	26	27	486
	1966	365	113	18	20	516
	1967	381	126	22	20	549
Set Net						
	1960	183	59		2	244
	1961	217	101	19	1	338
	1962	303	117	14	2	436
	1963	259	101	21	2	383
	1964	277	100	28	4	409
	1965	292	98	23	7	420
	1966	345	101	17	5	468
	1967	333	72	21	5	431
Drift Net						
	1960	2	44			46
	1961	17	86			103
	1962	55	98	24		177
	1963	24	85	5		114
	1964	65	89	5		159
	1965	62	98	4		164
	1966	97	88	4		189
	1967	135	109	5		249

^{1/} Distribution of licenses by sub-district represents that at the beginning of the fishing season (June 1), some fishermen transfer to other sub-districts during the season.

^{2/} A total of 5, 17, and ? fishwheels were operated commercially during 1965, 1966 and 1967 respectively.

APPENDIX TABLE 15

COMMERCIAL SALMON PACK BY SPECIES AND TYPE OF PROCESSING
YUKON DISTRICT, 1960 - 1967 1/

YEAR	CASES (48#)			FRESH-FROZEN (Round wt.in lbs.)			CURED KING SALMON		SALMON ROE (lbs)
	KING	COHO	CHUM	KING	COHO	CHUM	TIERCES	$\frac{1}{2}$ -TIERCE	
1960	13,000			<u>2/</u>	<u>2/</u>	<u>2/</u>	250	180	
1961	19,474			"	"	"	504	146	
1962	15,959	512	1,760	"	"	"	464	280	
1963	16,400	1,190		"	"	"	<u>2/</u>	<u>2/</u>	
1964	12,041			"	17,100	66,770	537	499	
1965	18,149			275,000	2,500	160,500	670	67	
1966	14,026	836	2,812	414,000	61,355	301,240	398	60	
1967	21,503		126	475,900	66,400	366,496	627	96	1,755

1/ Pack represents type of processing when fish were shipped out of district

2/ Information not available

APPENDIX TABLE 16

DOLLAR VALUE ESTIMATES OF YUKON DISTRICT COMMERCIAL FISHERY, 1960 - 1967 1/

<u>YEAR</u>	<u>GROSS VALUE OF CATCH TO FISHERMEN</u>	<u>WAGES EARNED</u> <u>2/</u>	<u>TOTAL INCOME TO DISTRICT</u>	<u>WHOLESALE VALUE OF PACK</u> <u>3/</u>	<u>TAX REVENUES TO STATE</u>
1960	\$	\$	\$	\$	\$
1961	437,000.00			1,292,300.00	37,500.00
1962	361,900.00			1,275,250.00	50,400.00
1963	412,300.00			1,550,400.00	42,000.00
1964	354,400.00			1,203,800.00	35,000.00
1965	542,300.00			1,412,700.00	42,000.00
1966	454,500.00			1,308,100.00	37,000.00
1967	606,400.00	250,000.00	856,400.00	1,864,800.00	41,700.00

1/ Information not available for 1960 and wages earned during 1961 - 1966

2/ Includes wages paid to tender boat operators, processing plant employees in district

3/ Based on type of processing when fish were shipped out of the district

APPENDIX TABLE 17

MEAN WEIGHTS AND NUMBERS OF SALMON PER CASE, YUKON DISTRICT, 1962 - 1967 ^{1/}

<u>YEAR</u>	<u>MEAN ROUND WEIGHT IN POUNDS</u> ^{2/}			<u>MEAN NO. OF FISH/CASE</u> ^{3/}		
	<u>KING</u>	<u>COHO</u>	<u>CHUM</u>	<u>KING</u>	<u>COHO</u>	<u>CHUM</u>
1962				3.2	13.3	10.5
1963						
1964	22.6		8.0	3.4		
1965	23.0		6.6	3.3		
1966	23.0		6.9	3.5		
1967	24.0	7.3	7.0	3.2		11.0

^{1/} Information is not available for some species

^{2/} Based on age-length-weight samples or fish ticket entries

^{3/} Standard 48 lb. case

APPENDIX TABLE

ESTIMATED MEAN PRICES PAID TO FISHERMEN, YUKON DISTRICT, 1961 - 1967 ^{1/} (PRICES PER FISH)

<u>YEAR</u>	<u>KING</u>	<u>COHO</u>	<u>CHUM</u>	<u>OTHER</u>
1961	\$3.50	\$	\$	\$
1962	3.50			
1963	3.50			
1964	3.75	.50	.25	
1965	4.50		.35	
1966	4.50	.50	.35	
1967	4.50	.50	.35	

^{1/} Information not available for some species

APPENDIX TABLE 18
YUKON RIVER COMPARATIVE SUBSISTENCE CATCH AND EFFORT DATA, 1961 - 1967
(Numbers per Fishing Family are in parenthesis)

YEAR	TOTAL CATCH		EQUIVALENT CATCH ^{1/}		MEAN EQUIVALENT CATCH PER FAMILY ^{1/}	
	King Salmon	Small Salmon ^{2/}	King Salmon	Small Salmon ^{2/}	King Salmon	Small Salmon ^{2/}
1961	23,719	407,814	23,719	405,632	38	650
1962	19,910	358,441	13,010	329,144	23	583
1963	32,656	421,625	26,141	372,578	44	624
1964	22,817	485,630	19,480	460,712	32	765
1965	19,723	458,379	16,950	436,306	31	806
1966	14,017	214,236	11,507	204,913	23	415
1967	19,661	288,595	16,306	256,926	35	545

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YEAR	FISHING FAMILIES SURVEYED ^{1/}	PEOPLE IN FISHING FAMILIES ^{1/}	SNOW MACHINES ^{1/}	SLED DOGS ^{1/}	GEAR OPERATED ^{1/}	
					GILL NETS	FISHWHEELS
1961	624	3,626(5.8)		4,806(7.7)	577	169
1962	564	3,279(5.8)		3,848(6.8)	613	138
1963	597	3,460(6.9)		4,155(7.0)	716	156
1964	602	3,524(6.0)		4,003(6.6)	840	155
1965	541	3,453(7.3)		3,974(7.3)	647	127
1966	494	3,144(6.4)		3,112(6.3)	578	116
1967	471	2,756(5.9)	192(.4)	2,752(5.8)	530	87

^{1/} Data from villages surveyed each year since 1961: mouth to Fort Yukon and Tanana River

^{2/} Mostly chum salmon, some pinks and cohos

